

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 9-11, 13-16, 19, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Petrak (US 2003/0075001).

As per claim 1, Petrak discloses a setting device (Title) comprising a setting unit (Abstract) featuring a remotely-operated drive (Fig. 35C), a telescopic device (Fig. 35) movable axially in a housing (1512) in a longitudinal axis of the setting unit, containing a hollow shaft (1522) and a spindle shaft (1510) connected to the hollow shaft in a manner that enables the hollow shaft to rotate and that enables the spindle shaft to undergo advancing movement relative to the remotely-operated drive and to thereby actuate a brake cable ([0173]), a connection (0168) enabling the transmission of a torque for actuating the brake cable from the remotely-operated drive to the hollow shaft, the connection enabling the hollow shaft to move axially relative to the remotely-operated drive, and an axial advancing support for the hollow shaft between the hollow shaft on the one side and the housing on the other side via at least one elastic element (1596; [0171]) stationary relative to the spindle shaft and the brake cable and arranged in parallel in the direction of the hollow shaft loaded axially by the advancing support and thereby axially deformable.

As per claim 2, Petrak discloses the setting device according to claim 1, comprising an electric motor (1506; [0129]) for the remotely-operated drive.

As per claim 3, Petrak discloses the setting device according to claim 1, comprising a transmission (1504) between the remotely-operated drive and the hollow shaft.

As per claim 4, Petrak discloses the setting device according to claim 3, comprising an intermediate gear wheel (1626) between a drive gear element (1624) of the remotely-operated drive and a drive gear wheel (1628) of the hollow shaft, the intermediate gear wheel and the meshing drive gear wheel of the hollow shaft being enabled to move axially relative to each other at least to the extent of an operational stroke distance of the at least one elastic element (The gears are capable of sliding axially under sufficient loading, Fig. 35).

As per claim 5, Petrak discloses the setting device according to claim 1, wherein the at least one elastic element is used as a correspondingly axially moved force sensor emitter for its longitudinal deformation for the axial advancing force acting from the motorized drive via the hollow shaft on the spindle shaft (1596).

As per claim 9, Petrak discloses the setting device according to claim 1, wherein the at least one elastic element is embodied as a spring screw (1596).

As per claim 10, Petrak discloses the setting device according to claim 9, wherein the at least one elastic element is arranged or embodied as a spring screw surrounding the hollow shaft concentric to the hollow shaft or the spindle shaft in its opposite direction of rotational advance (1596).

As per claim 11, Petrak discloses the setting device according to claim 1, wherein the at least one elastic element is embodied as a compression spring element (1596).

As per claim 13, Petrak discloses the setting device according to claim 5, wherein the at least one elastic element is used as a force sensor emitter for determining the brake application force of a motor vehicle parking brake (1596).

As per claim 14, Petrak discloses the setting device according to claim 5, wherein the at least one elastic element is used as a force sensor emitter for determining the brake release force of a motor vehicle parking brake (1596).

As per claim 15, Petrak discloses the setting device according to claim 1, wherein a first elastic element (1596) is loaded axially by advancing support for an axial advancing movement of the telescopic device, on application of a motor vehicle parking brake; and wherein a second elastic element (1618) is loaded axially in the other axial direction of movement of the telescopic device by advancing support, on release of the motor vehicle parking brake.

As per claim 16, Petrak discloses the setting device according to claim 15, comprising a different elasticity constant of the first elastic element by comparison with the elasticity constant of the second elastic element (1596, 1618).

As per claim 19, Petrak discloses the setting device according to claim 15, comprising an arrangement of the second elastic element axially before or after the first elastic element (Fig. 35).

As per claim 22, Petrak discloses a motor vehicle parking brake (Title), comprising a drive unit (Fig. 35) featuring a remotely-operated drive (Fig. 35C), a telescopic device (Fig. 35) movable axially in a housing (1512) in a longitudinal axis of the setting unit, containing a hollow shaft (1522) and a spindle shaft (1510) connected to the hollow shaft in a manner that enables the hollow shaft to rotate and that enables the spindle shaft to undergo advancing movement relative to the remotely-operated drive and to thereby actuate a brake cable ([0173]), a connection ([0168]) enabling the transmission of a torque for actuating the brake cable from the remotely-operated drive to the hollow shaft, this connection enabling the hollow shaft to move axially relative to the remotely-operated drive, and an axially advancing support for the hollow shaft between the hollow shaft on the one side and the housing on the other side via at least one elastic element (1596; [0171]) stationary relative to the spindle shaft and the brake cable during a drive into the release position of the brake of an axially loaded and thereby axially longitudinally deformable elastic element.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-8, 24-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Petrak (US 2003/0075001) in view of Flynn et al (US 2003/0066714).

As per claim 6, Petrak discloses the setting device according to claim 5, but does not disclose a force sensor receiver which is stationary relative to the spindle shaft and the brake cable and assigned to the force sensor emitter. Flynn et al discloses a parking brake system comprising a force sensor receiver (190; [0047]) which is stationary relative to the spindle shaft and the brake cable and assigned to the force sensor emitter. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the parking brake of Petrak by using the spring sensor assembly as taught by Flynn et al in order to provide a more accurate reading than would normally be gleaned from cable tension alone.

As per claim 7, Petrak and Flynn et al disclose the setting device according to claim 6. Flynn et al further discloses comprising an arrangement of the force sensor receiver as an integrated part of a control unit of the setting unit ([0047]).

As per claim 8, Petrak and Flynn et al disclose the setting device according to claim 7. Flynn et al further discloses wherein the control unit is arranged in the area of the telescopic device (Fig. 9).

As per claim 24, Petrak and Flynn et al disclose the setting device according to claim 6. Flynn et al further discloses wherein: the force sensor receiver is in the form of a Hall chip assigned to the magnetic force sensor emitter (190; [0047]).

As per claim 25, Petrak and Flynn et al disclose the setting device according to claim 6. Flynn et al further discloses comprising: an arrangement of the force sensor receiver as an integrated part of a control unit of the setting unit, which is accommodated by a fixed circuit board ([0047]).

Response to Arguments

5. Applicant's arguments filed 6/6/2011 have been fully considered but they are not persuasive. Applicant's arguments are directed towards the amended claims, specially the newly added functional limitation "for the hollow shaft". The spring 1596 provides support for input shaft 1522 by biasing 1580 which in turn supports the input shaft and other components.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN BOWES whose telephone number is (571)270-5787. The examiner can normally be reached on M-F 8:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEPHEN BOWES/
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